



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,935	02/25/2004	Paul Tzeng	3313-1119P	9554
2292 7590 12/27/2006 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER LE, THI Q	
			ART UNIT	PAPER NUMBER
			2613	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	12/27/2006	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 12/27/2006.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

Application No.

10/784,935

Applicant(s)

TZENG ET AL.

Examiner

Thi Q. Le

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/11/06, 12/13/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) filed on 10/11/2006, 12/13/2006 was considered by the examiner.

### *Specification*

3. The disclosure is objected to because of the following informalities:
  - a) On page 4, line 19, replace "to 600" with --de-multiplexer 600--, before "for further processing".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the

specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites, "collecting the redundant optical signals and combining the signals to a single optical signal". No-where, in the specification and the figures are there disclosures for performing combining multiples optical signals into a single optical signal. The closest description was on page 2 lines 1-20; but it differs from claim 1, in that it described receiving units 210A-B deliver two optical signals 220A-B to a single photodiode for optical-electrical conversion.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claim 1** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. **Claim 1** recites the limitation "collecting the redundant optical signals and combining the signals to a single optical signal" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2613

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claim 1** is rejected under 35 U.S.C. 102(b) as being anticipated by **Agurok et al. (US Patent # 6,369,925)**.

Consider **claim 1**, Agurok et al. clearly show and disclose, a wireless signal transmission and receiving system applied for a display device for receiving wireless signals omnidirectionally, comprising: a plurality of transmitting units (read as, transmitters 322-328; figure 3) for sending optical signals via optical beams; and a plurality of receiving units (read as, receiver 230-234; figure 2) for collecting the redundant optical signals (read as, same wavelength; column 4 line 46) and combining the signals to a single optical signal for conversion into an electrical signal for further processing (figures 2 and 3; column 4 line 46; column 5 lines 13-25 and 58-67; column 6 lines 20-31).

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
14. **Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agurok et al. (US Patent # 6,369,925) and in view of Miyamori (US Patent # 6,278,537).**

Consider **claim 2, and as applied to claim 1 above**, Agurok et al. disclose the invention as described above, except for, wherein each of the receiving units further comprises a photodiode for converting the single optical signal into the electrical signal.

In related art, Miyamori disclose, a wireless signal transmission and receiving system, wherein each of the receiving units further comprises a photodiode (read as, each light receiving circuit 215a-b, convert the optical signal into electrical signal; figure 7) for converting the single optical signal into the electrical signal (figure 7; column 9 lines 27-37).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to incorporate the teachings of Miyamori with Agurok et al. Since having a plurality of transmitters and receivers ensure that communication is not suspended when one of the optical transmission path is blocked.

Consider **claim 3, and as applied to claim 1 above**, Agurok et al. as modified by Miyamori further disclose, wherein the transmitting units (read as, light emitting circuit 206a-b; Miyamori, figure 7) further comprises beam forming optics (read as, light emitting diode and diffuser; Miyamori, figure 7) (Miyamori, figure 7; column 9 lines 11-19).

Consider **claim 4, and as applied to claim 1 above**, Agurok et al. as modified by Miyamori further disclose, wherein the receiving units (read as, light receiving circuits 251a-b; Miyamori, figure 7) further comprises beam collecting optics (read as, lens; Miyamori, figure 7) (Miyamori, figure 7; column 9 lines 27-37).

15. **Claims 5-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Agurok et al.** (US Patent # 6,369,925) and in view of **Ruziak** (US Patent # 6,907,013).

Consider **claim 5, and as applied to claim 1 above**, Agurok et al. disclose the invention as described above, except for, wherein the optical signals are converted from audio and video source devices.

In related art, Ruziak disclose, a wireless communication system, wherein the optical signals are converted from audio and video source devices (read as, optical communication signals from the television 28 and baser unit 22; figures 1a-c) (figures 1a-c; column 6 lines 43-54).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to incorporate the teachings of Ruziak with Agurok et al. Since Ruziak provides a high-speed communication link capable of supporting interactive multimedia transmission.

Consider **claim 6, and as applied to claim 1 above**, Agurok et al. as modified by Miyamori further disclose, wherein the optical signals are converted from computers (read as,

Art Unit: 2613

optical communication signals from the personal data assistant 29 and baser unit 22; Ruziak, figures 1a-c) (Ruziak, figures 1a-c; column 6 lines 50-55).

Consider **claims 7 and 8, and as applied to claim 1 above**, Agurok et al. as modified by Miyamori further disclose, wherein the optical signals are analog or digital in nature (read as, IR communication links may carry either digital or analog data; Ruziak) (Ruziak, column 3 lines 34-36).

### *Conclusion*

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Crimmins, James W.; 4,977,619

b) Shibuya, Toshiyuki; 6,509,991

c) Kube et al.; 2004/0033078

d) Gfeller et al.; 6,850,709

e) Hiramatsu, Takuma; 7,099,589

17. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314



Art Unit: 2613

18. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Thi Le whose telephone number is (571) 270-1104. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*Thi Le*

  
**KENNETH VANDERPUYE**  
**SUPERVISORY PATENT EXAMINER**